

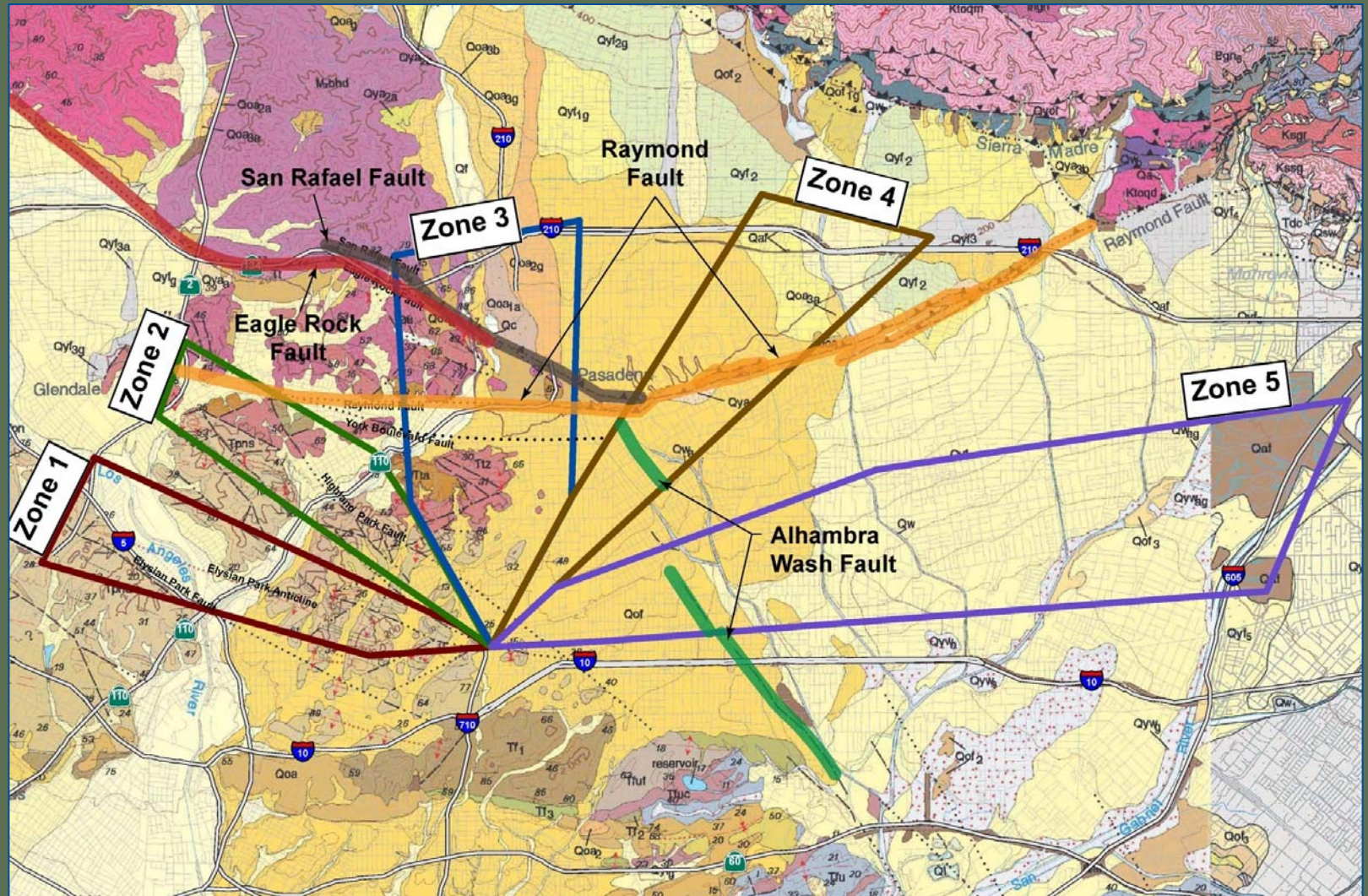
State Route 710 Tunnel Technical Study (Geotechnical Report)

California Transportation Commission Meeting
July 1, 2010



Metro

Study Zone




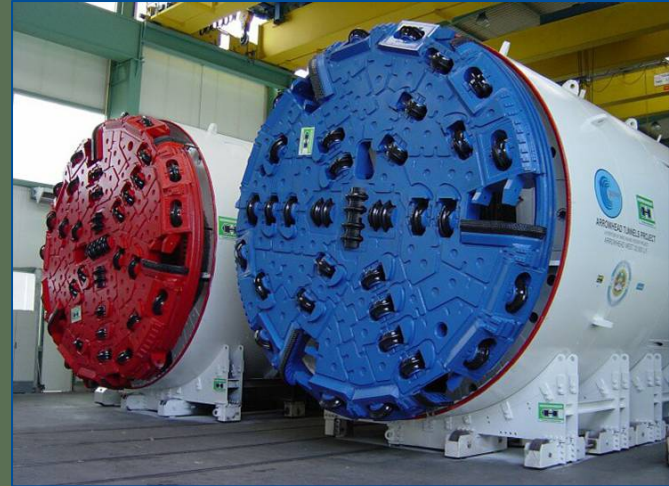
Metro

Scope of Tunnel Study

- Collected and reviewed existing information
- Completed field exploration
- Evaluated data
- Prepared geotechnical summary report

Feasibility of Tunneling

- Tunneling feasible in all 5 zones
- Each zone presents unique geotechnical conditions
- Technology exists to address these conditions
- Successful in
 Los Angeles, California, and around the world

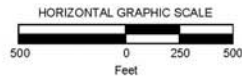
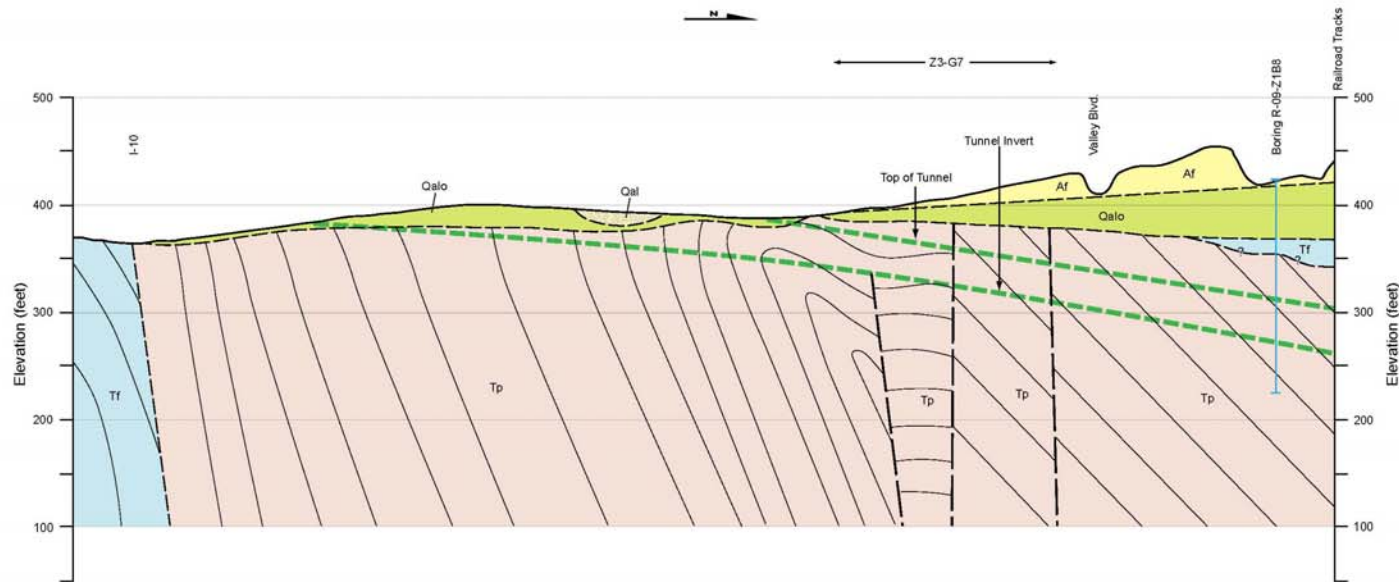


Results of Zone Comparison

Zone	Variable Ground Conditions	Unstable Soils	Active/ Potentially Active Fault Crossings	Groundwater Conditions	Gas Potential	Contaminated Soil and/or Groundwater
1	Low	Moderate	Low	Low	High	Low
2	Low	Low	Low	Low	High	Low
3	Moderate	Moderate	Low	Low	Moderate	Low
4	Moderate	High	Low	Moderate	Low	Moderate
5	Moderate	High	Low	High	Low	Moderate
Phase [*]	D, C	D, C	D, C, O	C, O	C, O	D, C

D - Design, C - Construction, O - Operation

Approach at Valley Boulevard



EXPLANATION

UNITS (from Lamar, 1970)

Af	Artificial Fill
Quaternary Deposits	
Qal	Alluvium: primarily sand and gravel
Qalo	Old Alluvium
Fernando Formation (Pliocene; Undifferentiated)	
Tf	Siltstone and claystone
Puente Formation (Late Miocene)	
Tp	Interbedded Siltstone, claystone, mudstone, shale and sandstone

SYMBOLS (All locations are approximate)

	R-09-Z1B8 Continuous Core Boring (CH2M HILL, this study)
	Z3-G7 Seismic Reflection Line (CH2M HILL, this study)
	Typical Tunnel Profile (Approximate Top and Invert of Tunnel Shown)
	Inactive Fault
	Geologic Contact, dashed where inferred or indefinite

Potential Portal South of Valley Boulevard

Representative Geologic Profile
Southerly Portal Approach Area
SR-710 Tunnel Technical Study
Los Angeles County, California

CH2MHILL

Study Accomplishments

- Collected an extensive amount of geotechnical data
- Completed targeted investigations to supplement existing data
- Evaluated key issues and reviewed tunnel case histories
- Determined tunneling in all 5 zones is geotechnically feasible

Metro Board Actions

MAY 2010

- Board approves staff recommendation to:
 - Receive and file geotech tunnel study findings
 - Conduct robust scoping, alternatives analysis, etc., to determine appropriate environmental documents
 - Execute necessary funding agreements w/CT
- 3 Board motions introduced, staff analysis requested

JUNE 2010

- Board clarifies 2 motions, then approves all 3 May Motions
 - One amendment to direct that all modes and zones are evaluated
 - One modification to eliminate potential non-compliance of CEQA/NEOA guidelines (e.g. early removal of project alternatives)

State Route 710 Gap Closure Next Steps

- Robust Scoping Process – 6 Months
 - Review and summarize previous studies
 - Solicit public input for upcoming environmental review/analysis
 - Update Purpose and Need Statement
 - Develop/Refine Alternatives
- Initiate Environmental Review Process – 2-2 ½ years
 - Conduct detailed traffic, air quality, health and other environmental impact analyses
 - Conduct public meetings to solicit input on project alternatives
 - Advance locally preferred alternative (s) for design
- Tandem Efforts – Continuous
 - Outreach
 - Financial Analysis
 - Public Private Partnership Opportunities
 - Benefits and Costs